Los Angeles County
Metropolitan Transportation Authority

First/Last Mile at LA Metro: A System Wide Approach

Planning Horizons July 2017

Metro

PRESENTATION OVERVIEW

Overview

1. What we are trying to accomplish
2. Conditions in Los Angeles
3. Techniques used to reach our goals
4. First/Last Mile Improvements

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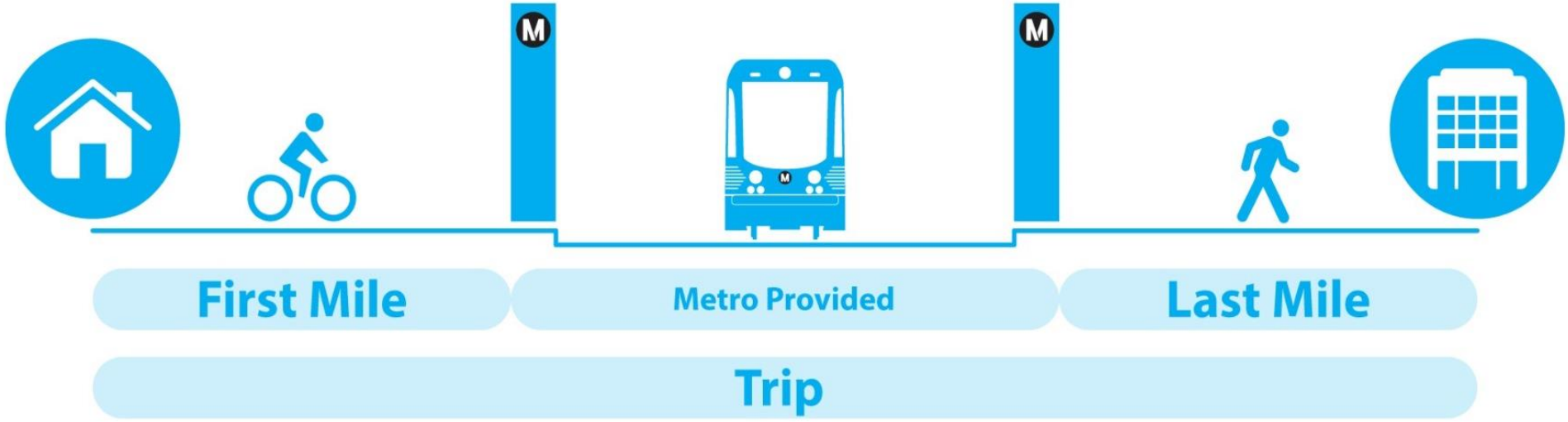
WHAT IS FIRST/LAST MILE?



The “first/last mile” is the part of a person’s “trip” that happens beyond the stations.

If people cannot easily connect to stations, they will not use transit.

Metro wants to connect people to stations, so they can get to where they need to go.

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FIRST/LAST MILE OBJECTIVES

First/Last Mile Program Objectives

- Expand the reach of transit through infrastructure improvements.
- Maximize multi-modal benefits & efficiencies.
- Improve the safety and experience of transit users.
- Create transit oriented communities.

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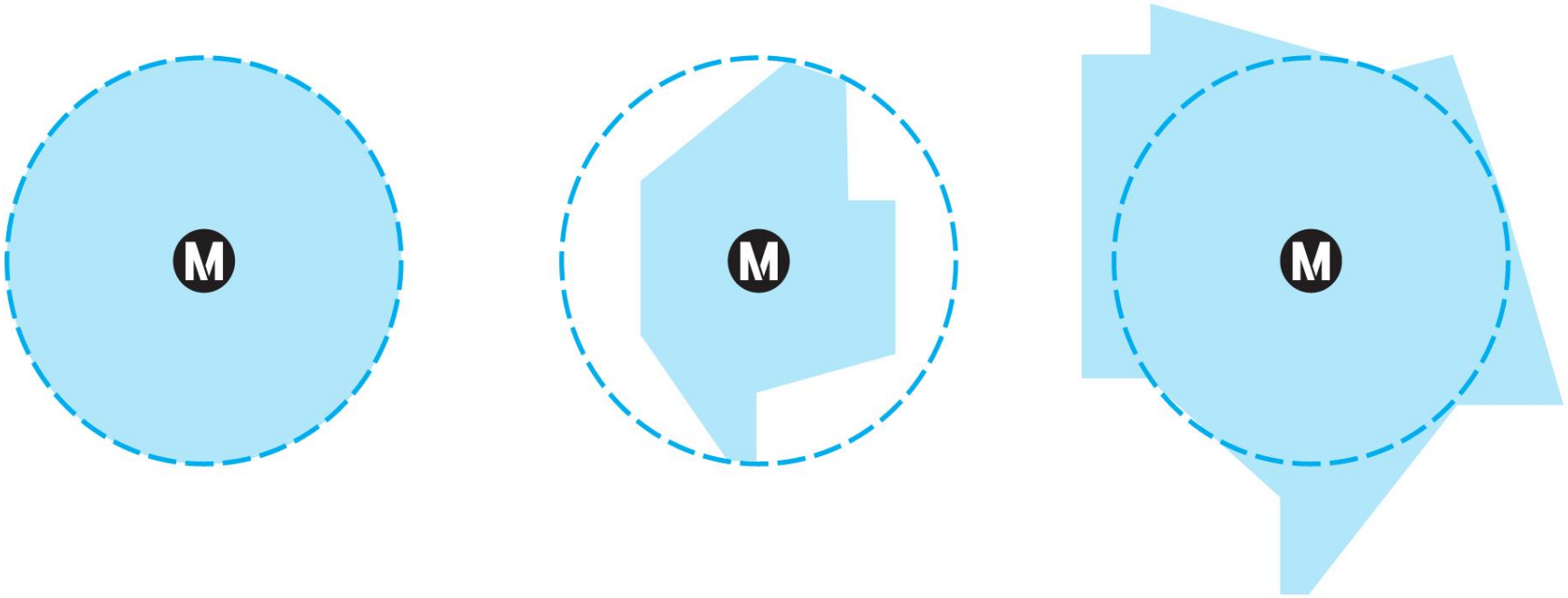
FIRST/LAST MILE STRATEGIC GOALS

Expand and improve access to bus and rail transit stations by active modes and local transit.



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Metro Rail & Busway with Measure M Transit Projects

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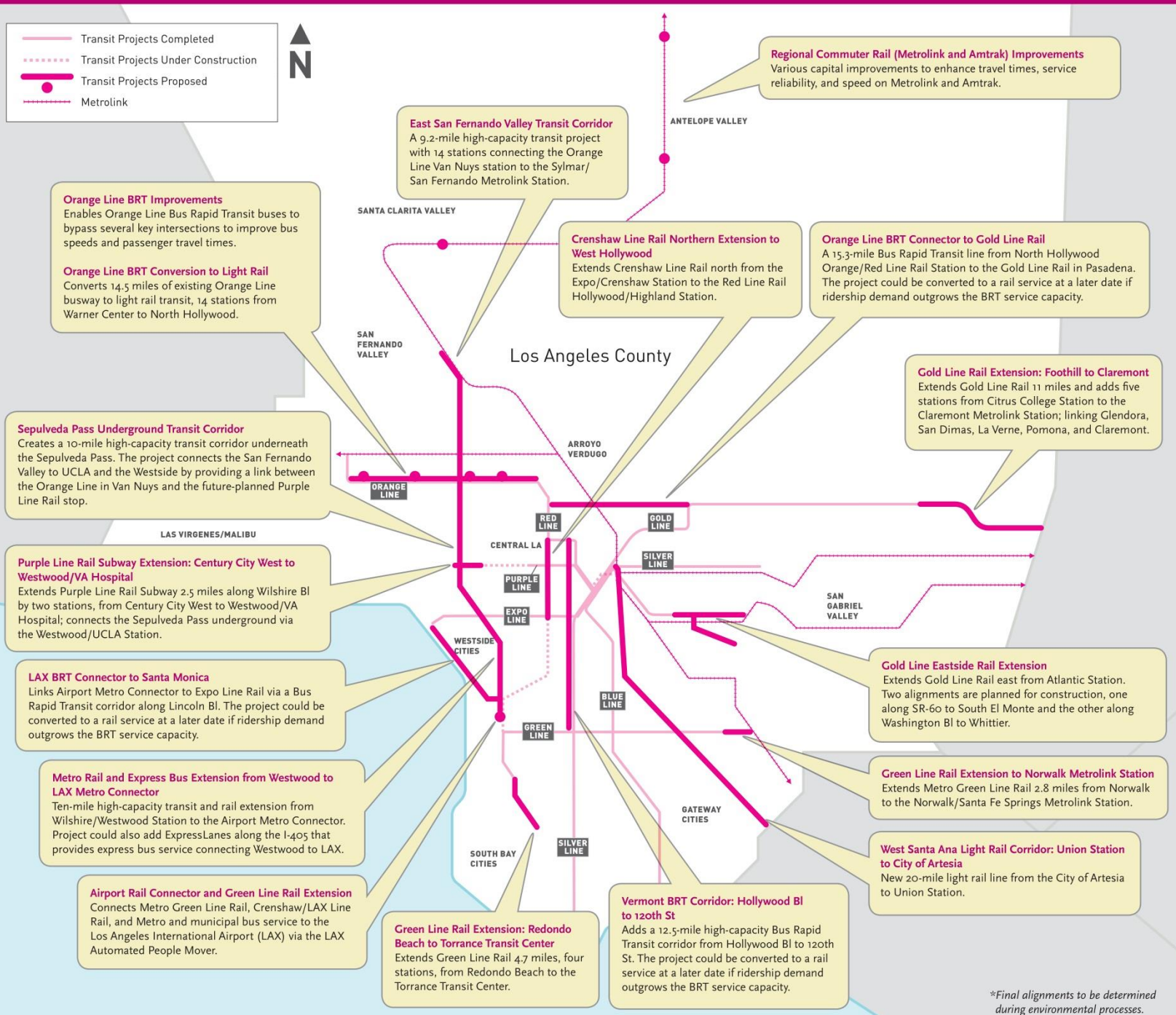
For more information, go to *metro.net/theplan*.

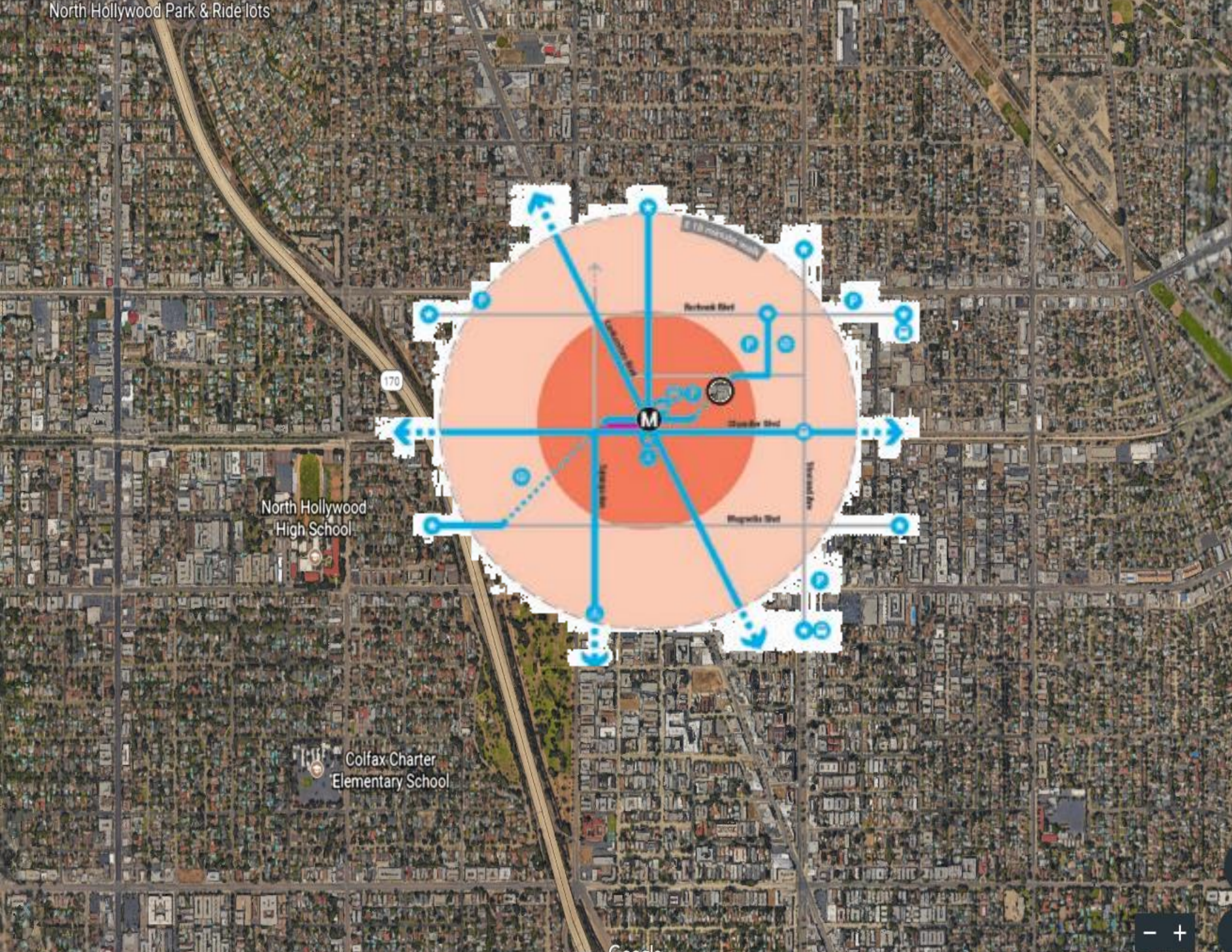
Los Angeles' Existing Transit System

Planned Transit System Expansion

MEASURE M METRO TRANSIT PROJECTS



**Final alignments to be determined during environmental processes.*


North Hollywood Park & Ride lots
170
North Hollywood
High School
Colfax Charter
Elementary School
M

HOW DID WE GET HERE?

A transit network fitted to an auto oriented landscape

A transit network that extends beyond rail lines and stations


PED XING
Klump Av
ON RED
M path
M CAR SHARE


170 NORTH
Sacramento
M path
5 min.
10 min.
60% of Amaz
Rainforest
Tropical d
tions for tim
al needs in
gions, such
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sions.
Two immedia
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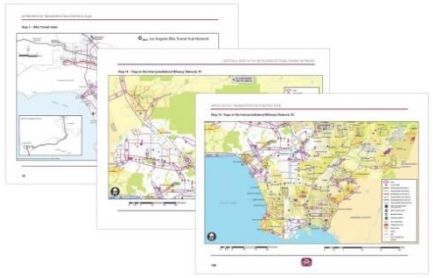
deforestation
rise to dange
steps are tak

ACTIVE TRANSPORTATION STRATEGIC PLAN

HOW DID WE GET HERE?



Bicycle Transportation Strategic Plan

2006

2009

Long Range Transportation Plan

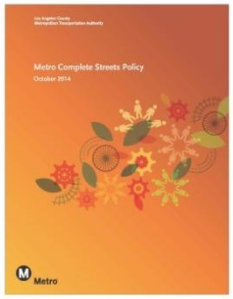
Countywide Sustainability Planning Policy

2012

First Last Mile Strategic Plan

2014

Complete Streets Policy



Mobility Matrices

2015

2016

Active Transportation Strategic Plan

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FIRST/LAST MILE BOARD POLICY: MAY AND JUNE 2016
HOW DID WE GET HERE?

Motions 14.1 and 14.2

Expanded direction for first/last mile planning and implementation:

- Planning for 254 Stations
- Incorporation of Countywide FLM Priority Network into LRTP
- Technical and Grant Assistance for Local Jurisdictions
- Implementation of Purple Line Phase 2 (and beyond)
- Integration of FLM into future transit capital projects
- Local jurisdictions may count FLM improvements toward 3% Local Contribution

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VARIETY OF METRO TRANSIT STATIONS
Existing Stations

Blue Line: Slauson Station

VARIETY OF METRO TRANSIT STATIONS
Existing Stations

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Existing Stations

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VARIETY OF METRO TRANSIT STATIONS
Existing Stations

Expo Line: Downtown Santa Monica Station

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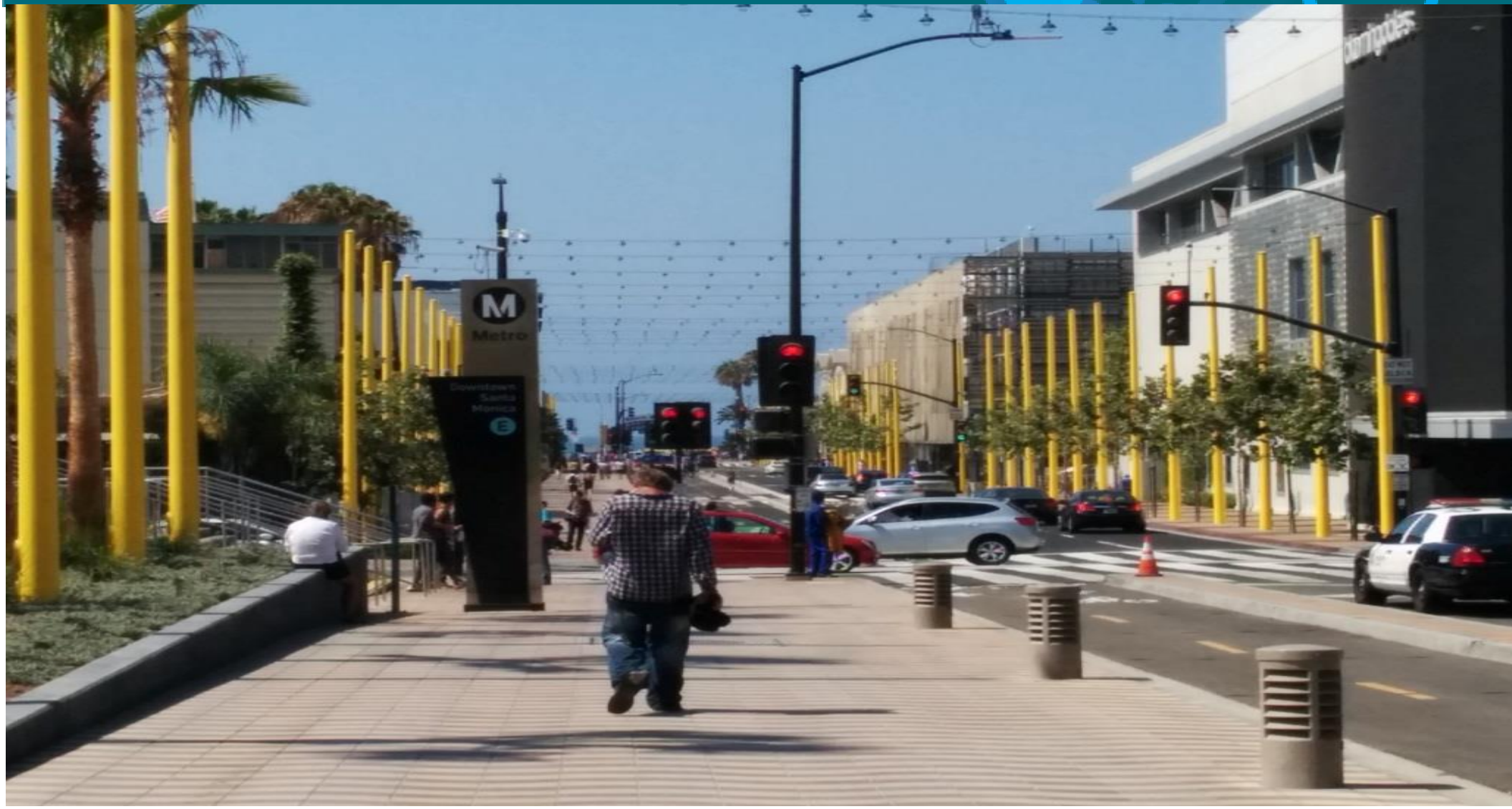
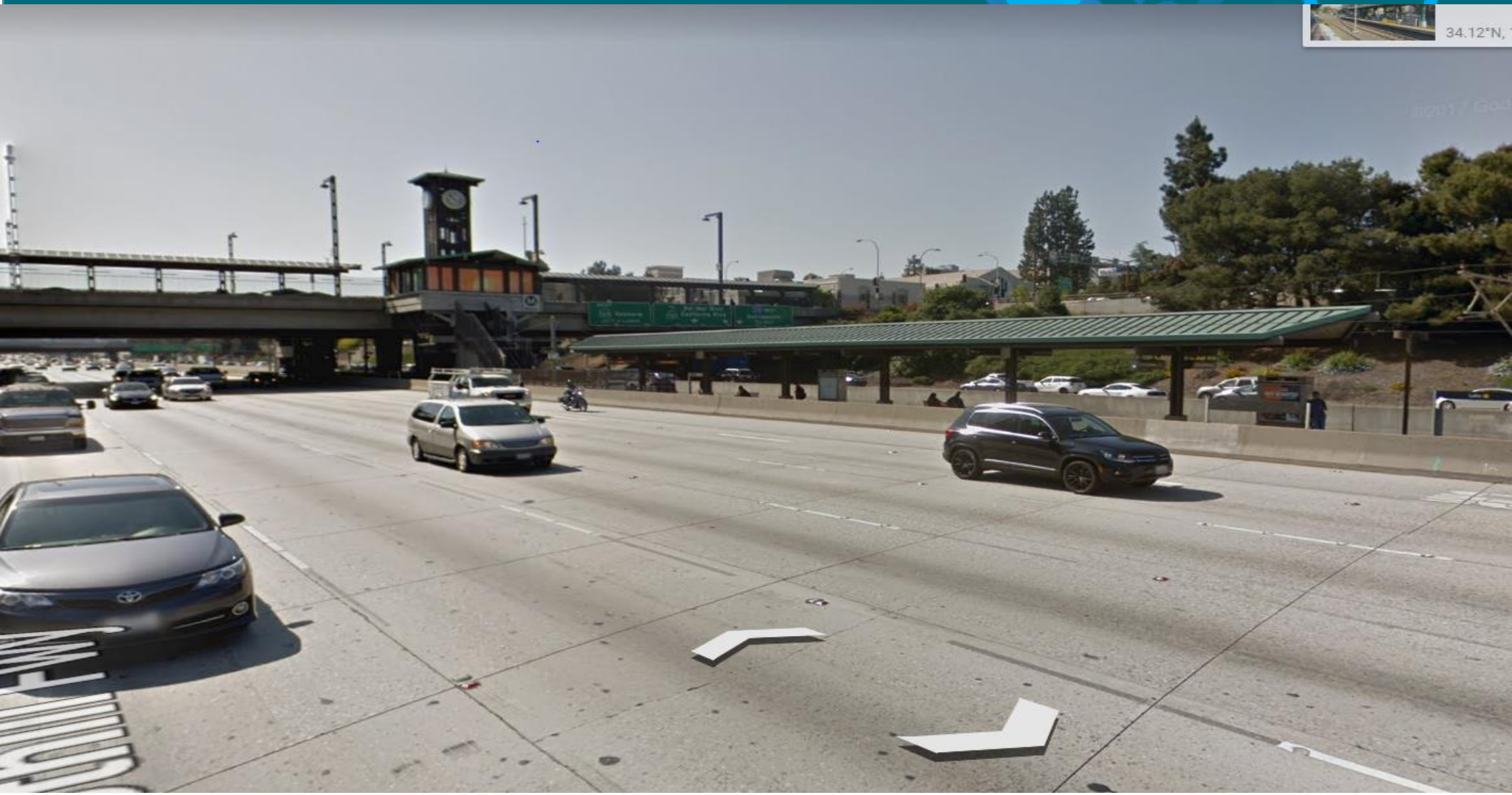


Expo Line: Downtown Santa Monica Station

VARIETY OF METRO TRANSIT STATIONS
Existing Stations



Gold Line: Lake Station

VARIETY OF METRO TRANSIT STATIONS
Existing Stations

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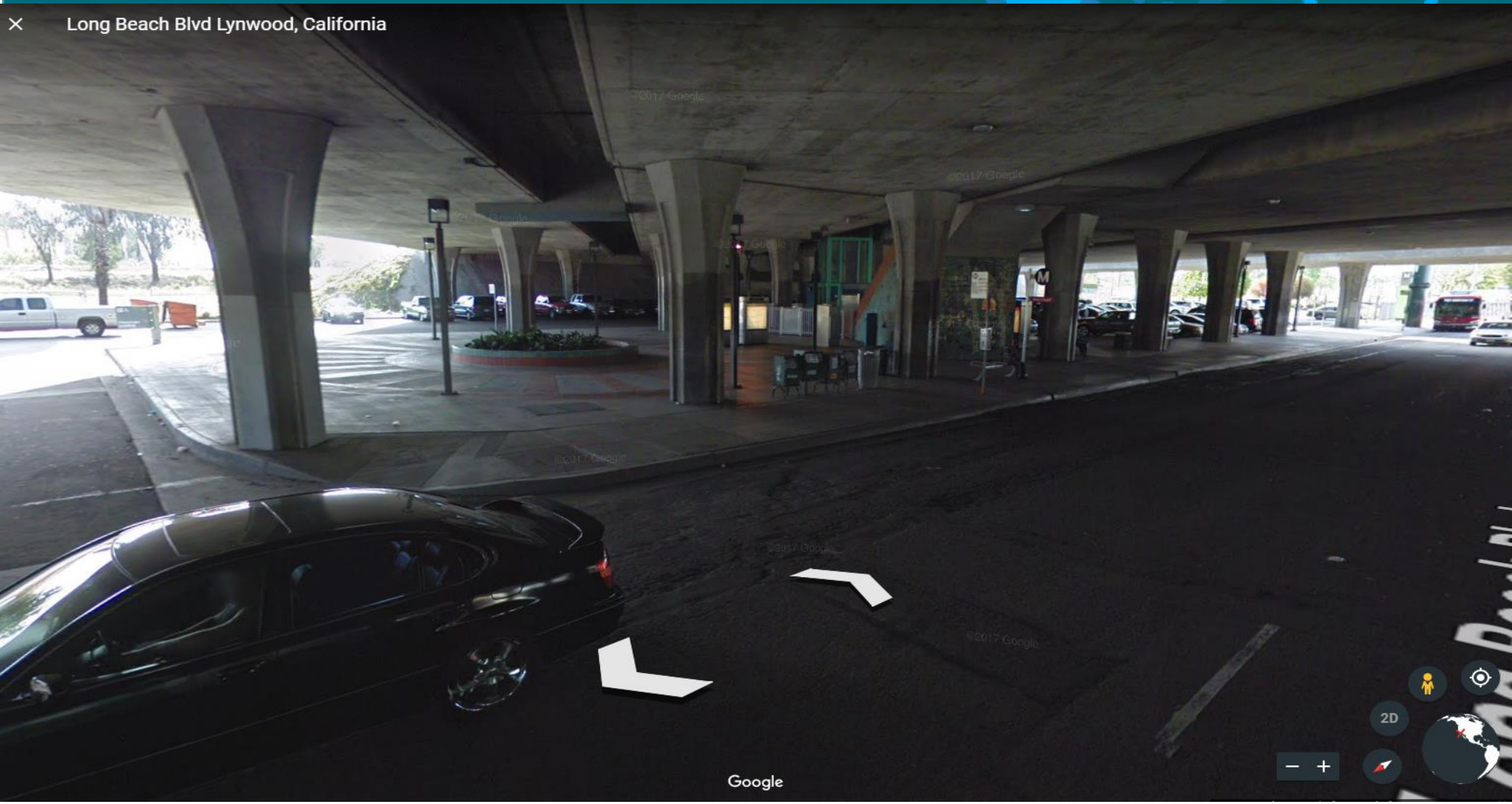

Green Line: Long Beach Boulevard Station

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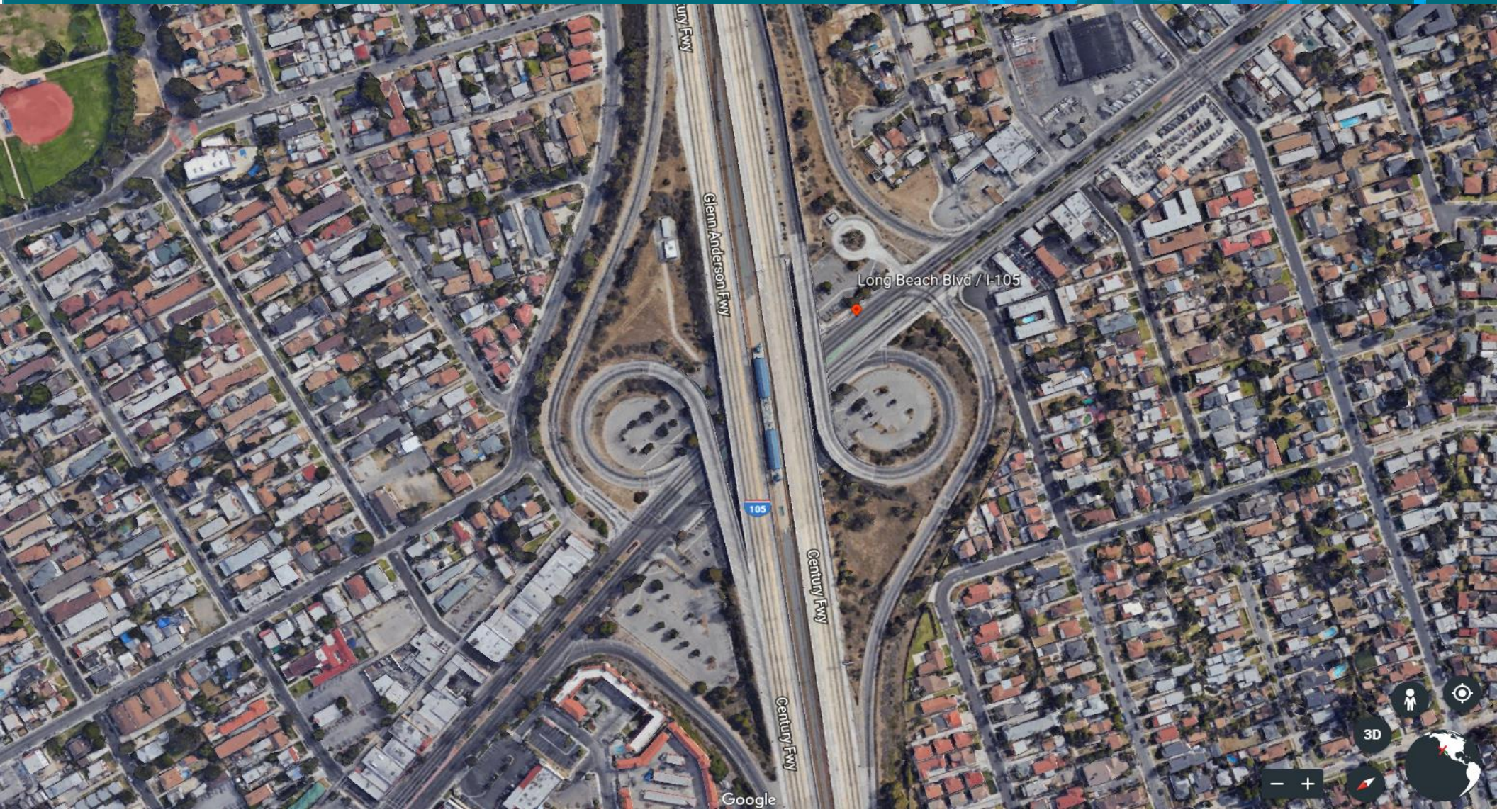
VARIETY OF METRO TRANSIT STATIONS
Existing Stations



Green Line: Long Beach Boulevard Station

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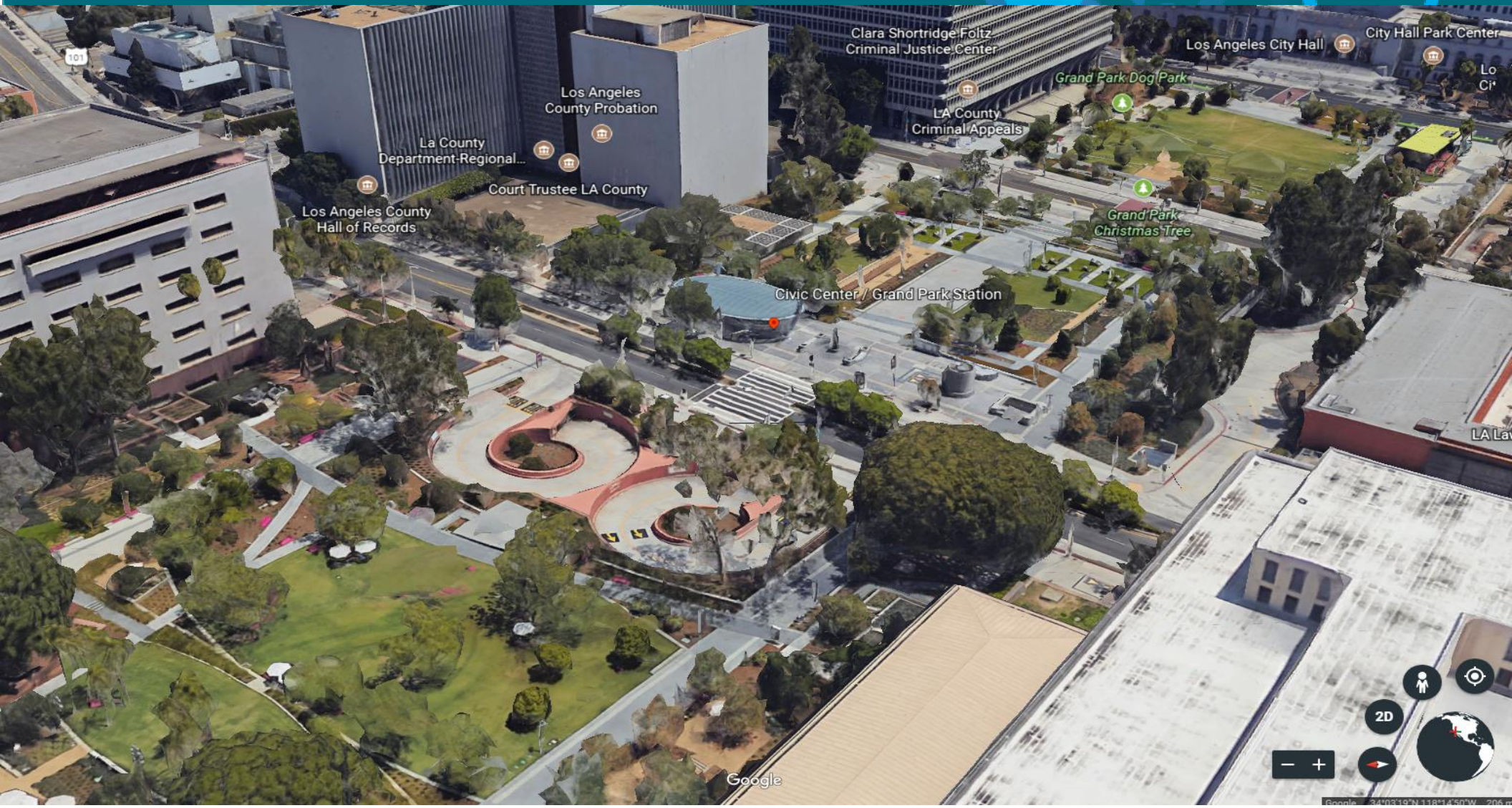
Existing Stations



Red Line: Civic Center Station

VARIETY OF METRO TRANSIT STATIONS
Existing Stations

Red Line: Civic Center Station

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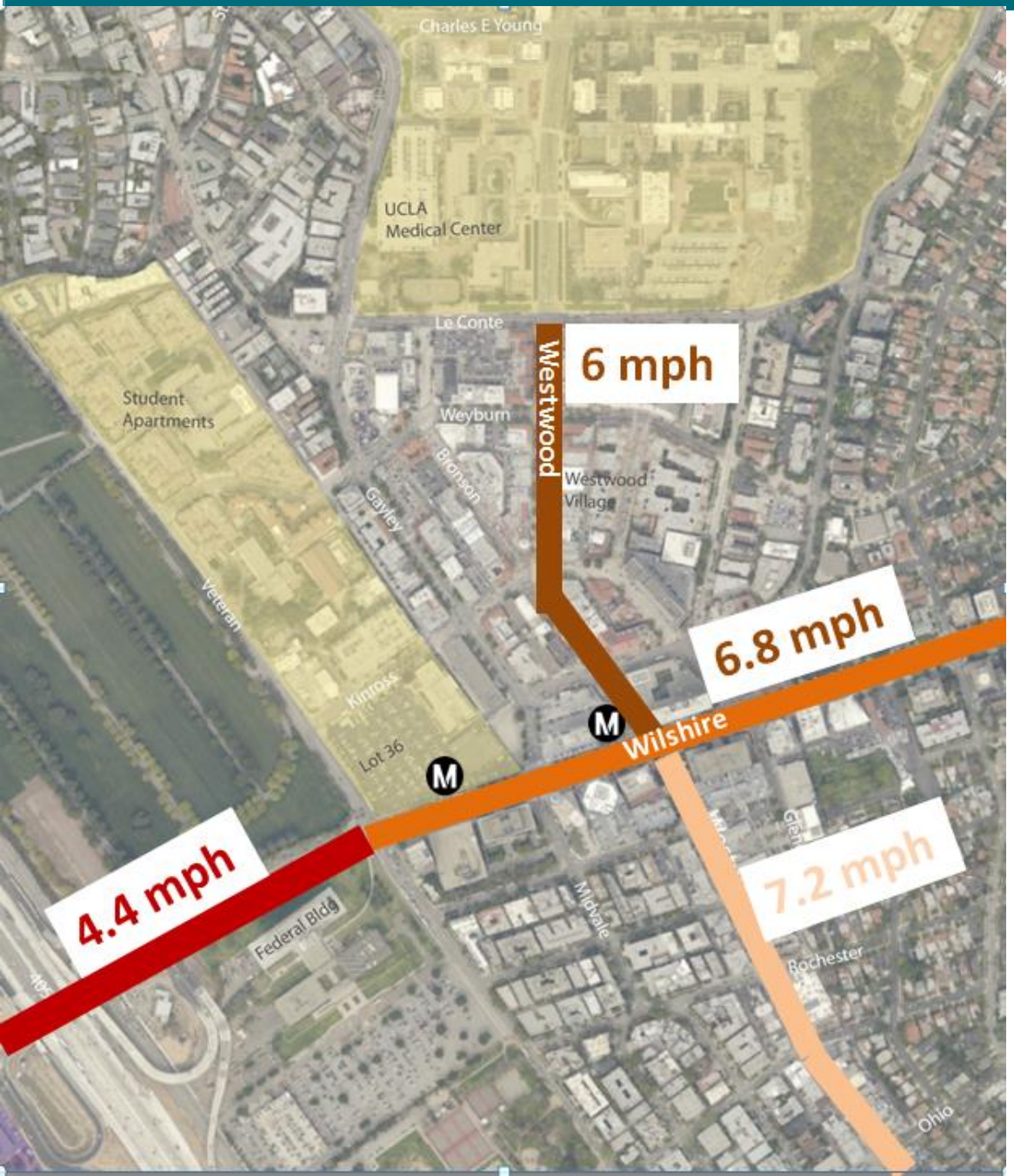
VARIETY OF METRO TRANSIT STATIONS
NEW STATION CHALLENGES



Major Congestion

Vehicular Travel Speeds

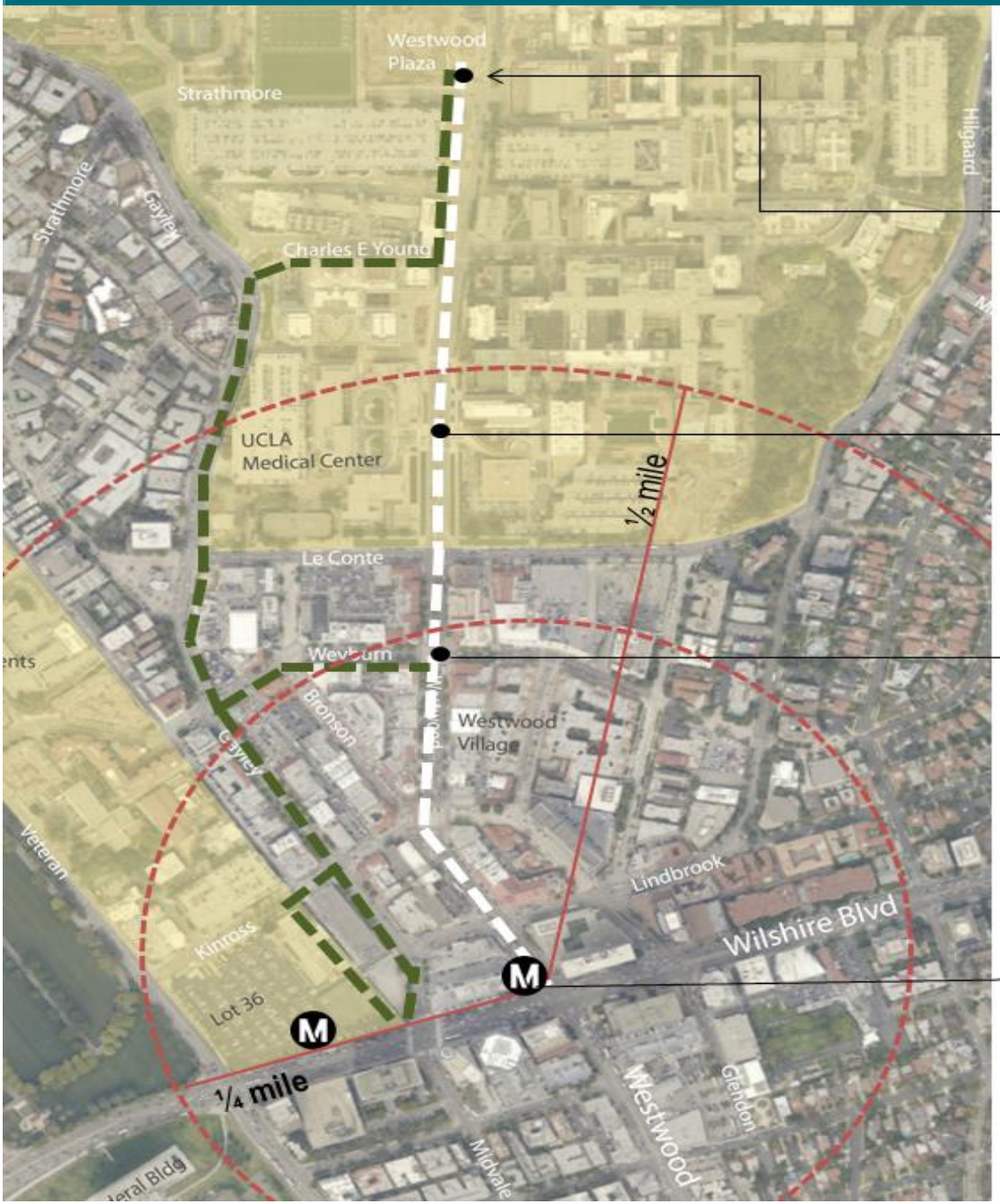
- 6 mph on Westwood
- 4.4 mph on Wilshire

Active Transportation

- 9.5 mph = bicycling
- 3 mph = walking

Purple Line: Westwood/Wilshire Station

VARIETY OF METRO TRANSIT STATIONS
NEW STATION CHALLENGES



First/Last Mile

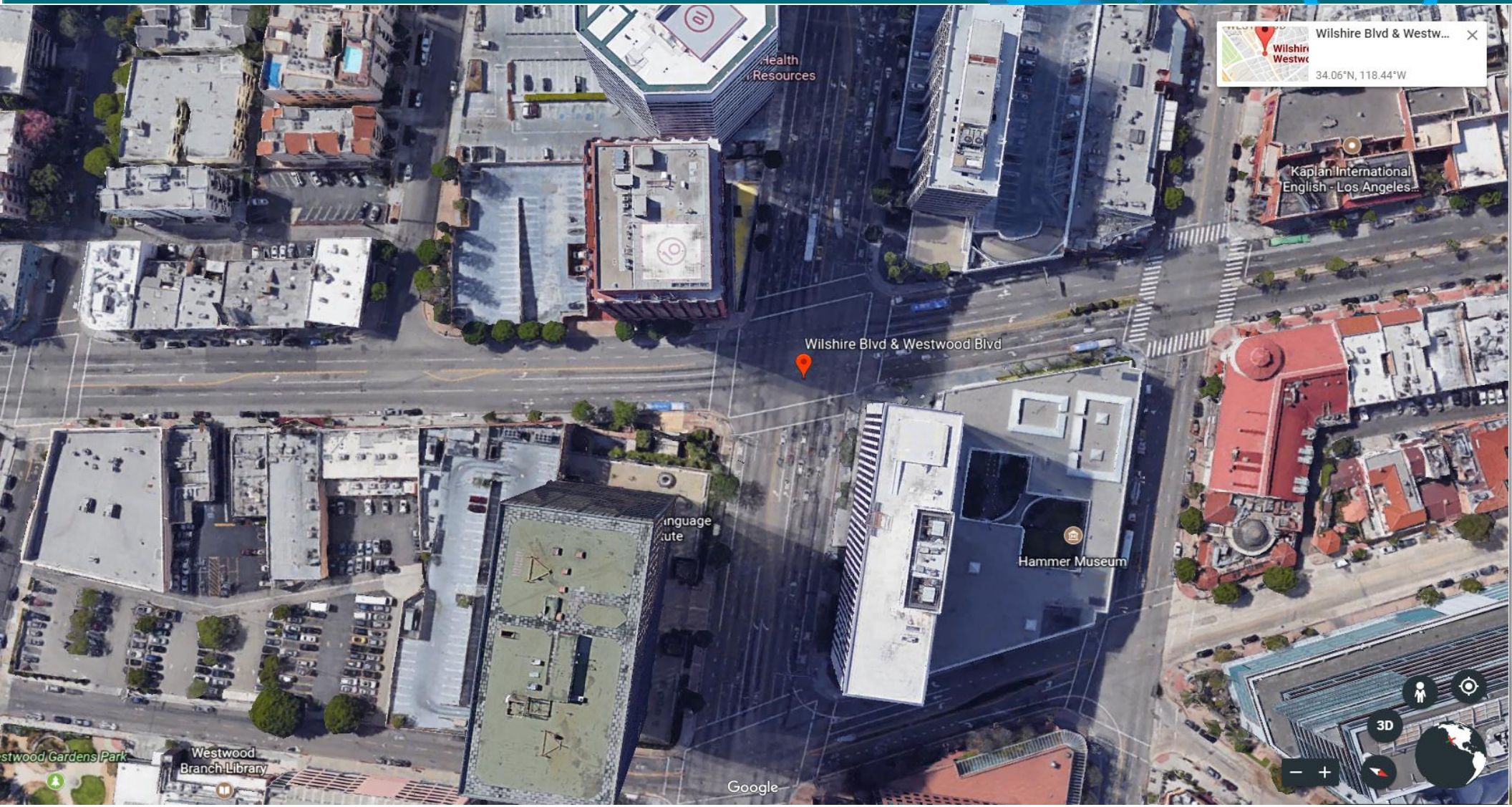
UCLA Campus/ Pauley Pavilion
15 walk (0.75 miles)
6 min bike (1 mile via Gayley)
7 min bus

UCLA Medical Plaza
10 min walk, 0.5 miles,
4 min bike, 0.7 mile (Gayley)
5 min bus

Westwood Village
6 min walk, 0.4 miles,
3 min bike, 0.4 miles (Gayley),
3 min bus

Metro Entrance
Wilshire/Westwood

VARIETY OF METRO TRANSIT STATIONS
NEW STATION CHALLENGES



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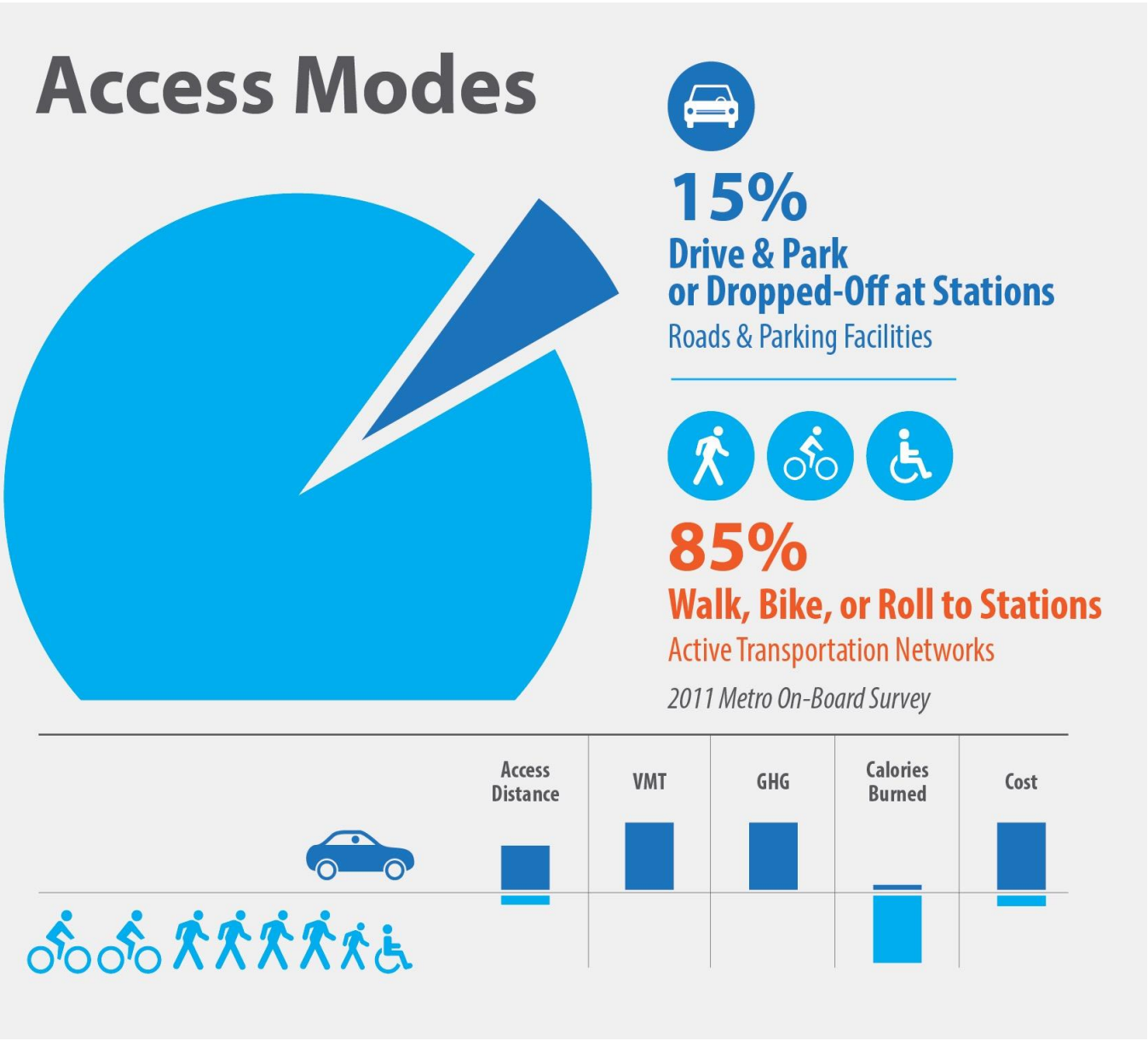
Purple Line: Westwood/Wilshire Station

CO-BENEFITS AND OUTCOMES



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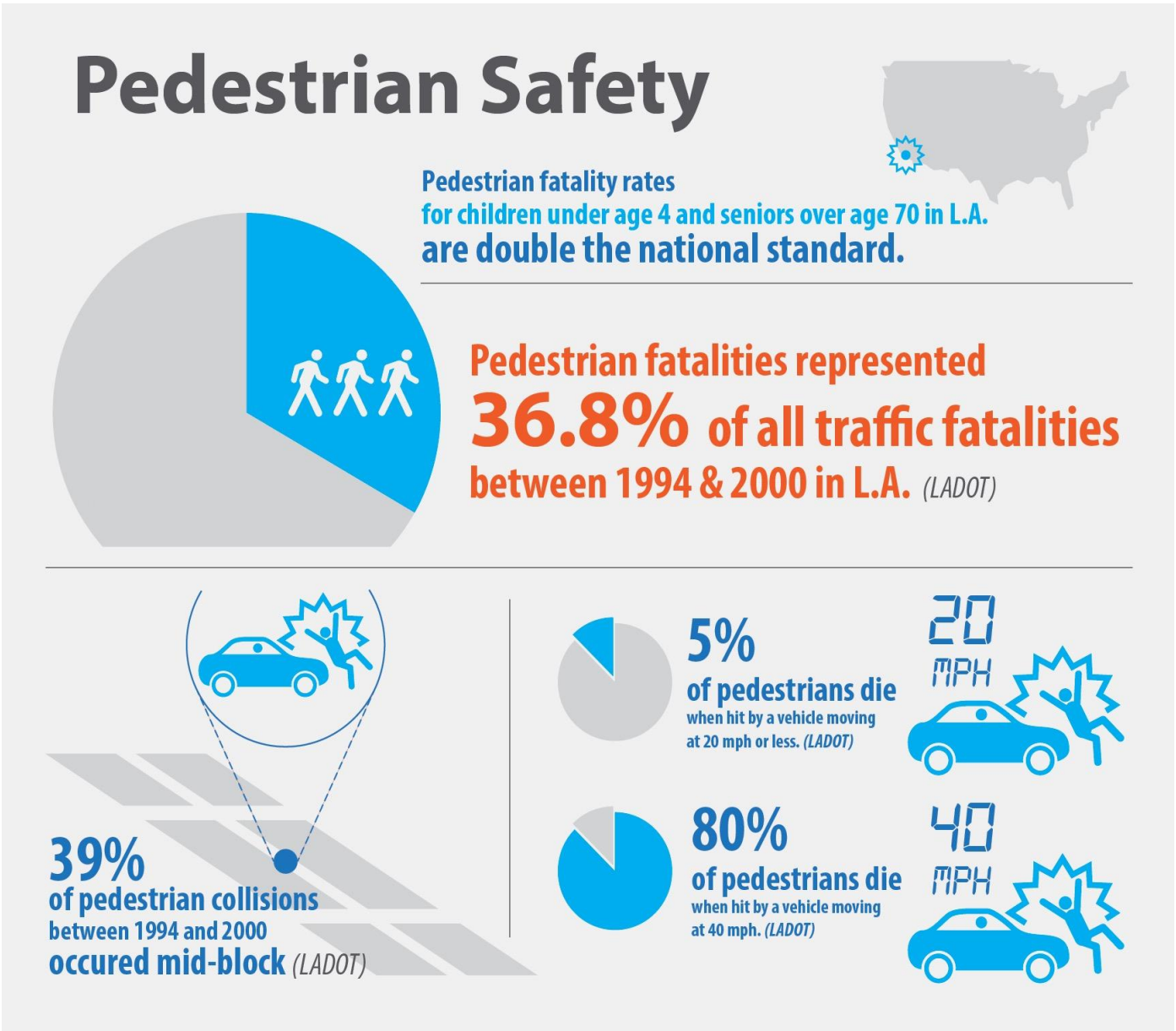

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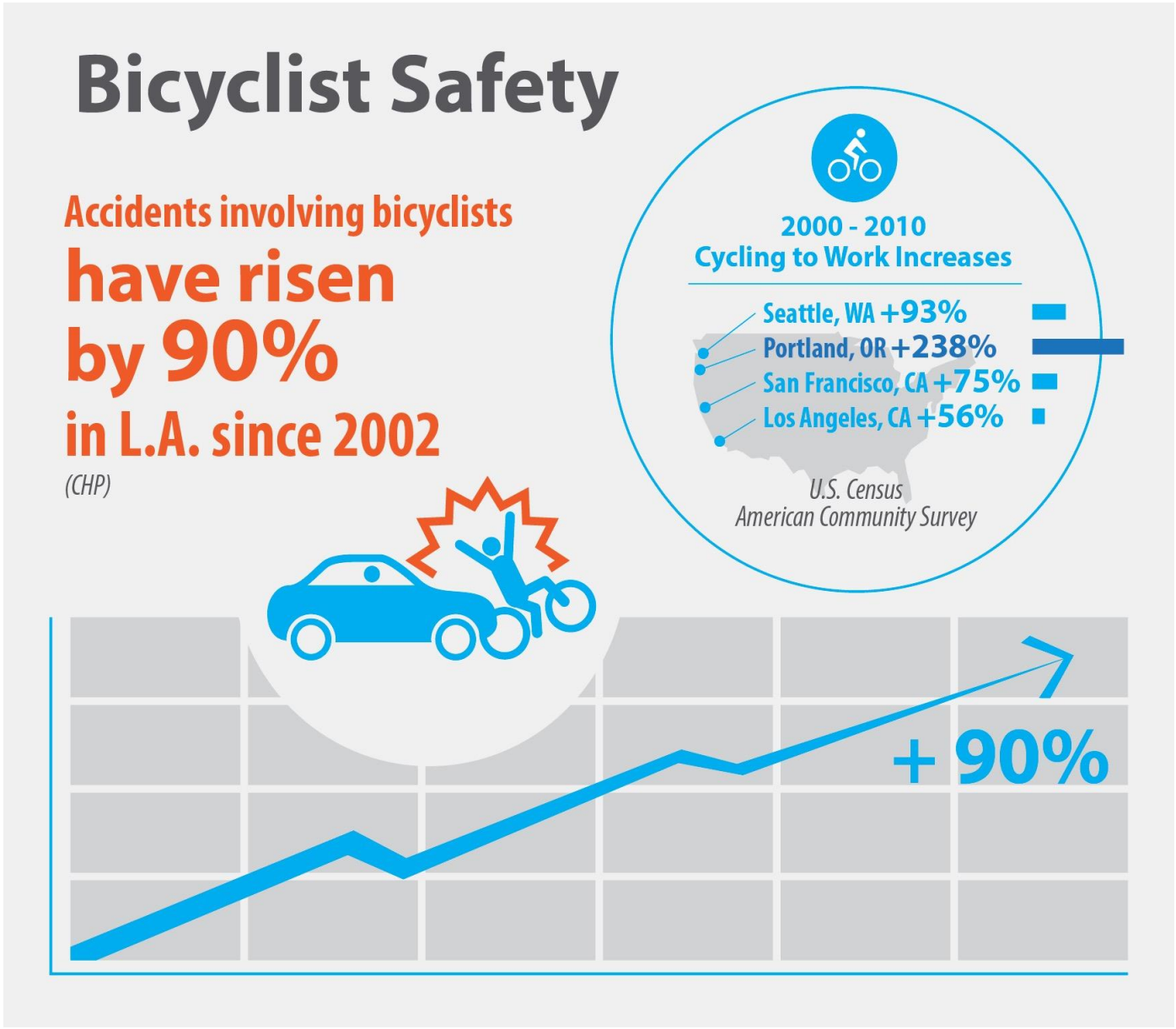

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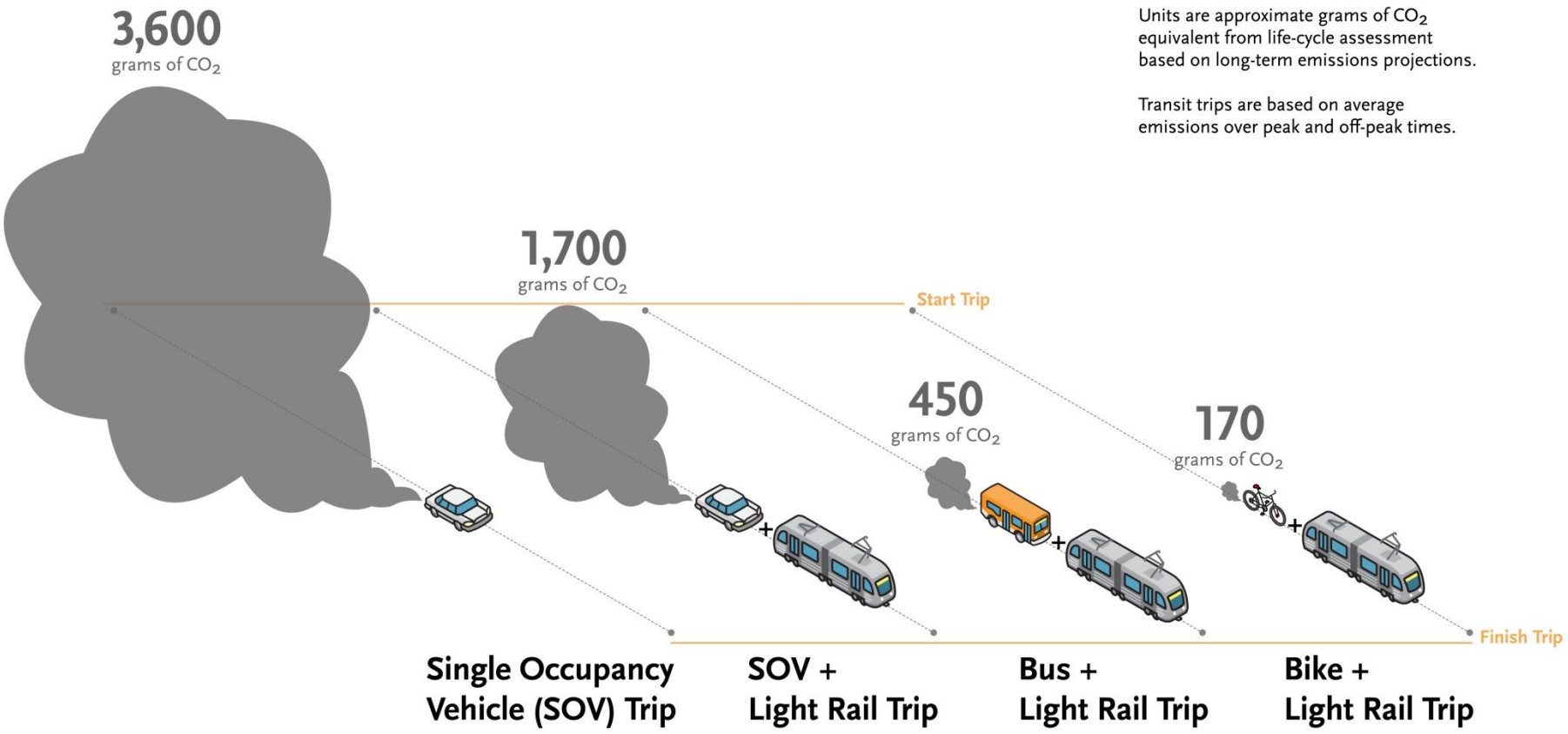
CO-BENEFITS AND OUTCOMES

Greenhouse Gas Emissions Per Person Per Trip



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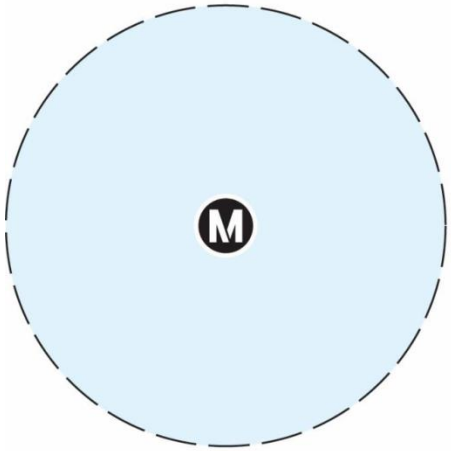
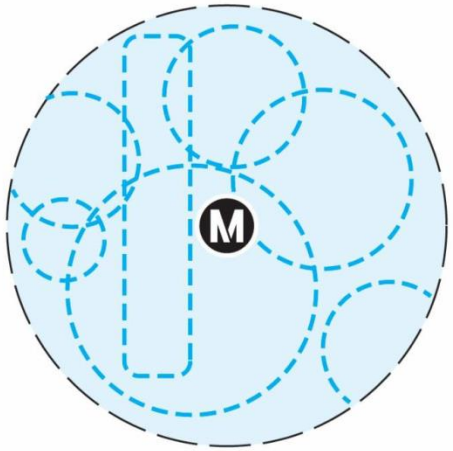
Mikhail Chester et al, "Infrastructure and Automobile Shifts: Positioning Transit to Reduce Life-Cycle Environmental Impacts for Urban Sustainability Goals", *Environmental Research Letters* 8, no.1 (2013). doi:10.1088/1748-9326/8/1/015041

First/Last Mile Methodology and Planning Techniques

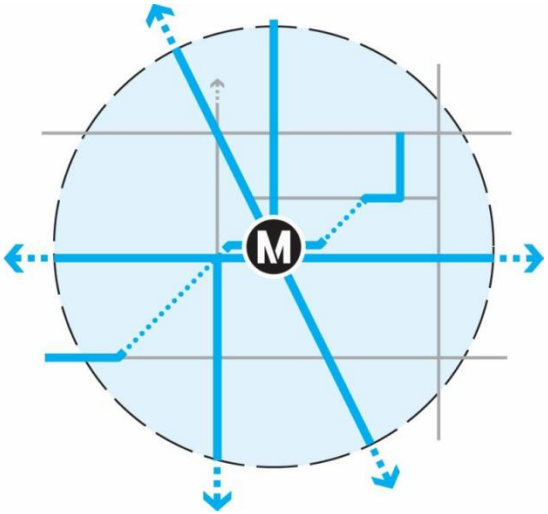
PLANNING TECHNIQUES



1
Site Area Definition



2
Analyze Existing Conditions



3
Layout Pathway Network

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PLANNING TECHNIQUES

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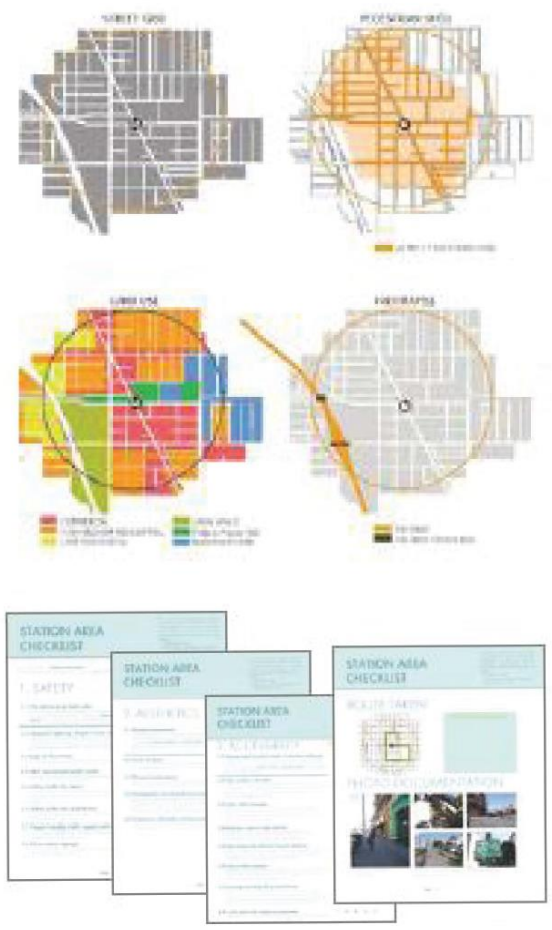
DATA ANALYSIS AND COLLECTION
ANALYZE EXISTING CONDITIONS



1A. Mapping and Data Analysis
Active Transportation GIS Mapping Tools
Station Analysis Maps

1B. Field Observation of Analysis
Station Area Checklists
Micro-level, ground level analysis
Walk Audit/Field Observation
Modal Split
Bike/Ped/Bus/Drop Off/User Counts
Bicycle Facilities
Pedestrians: Crosswalks

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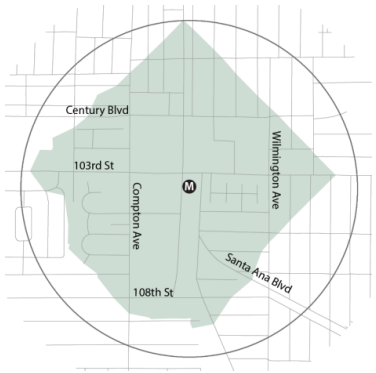
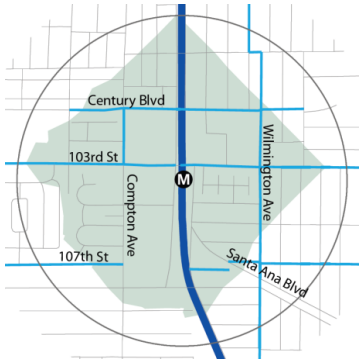
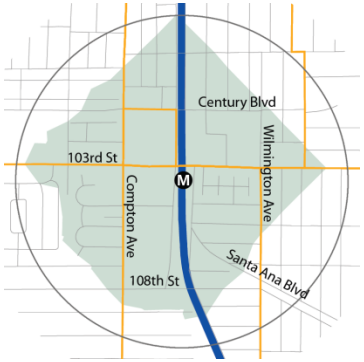
MAP ANALYSIS
ANALYZE EXISTING CONDITIONS



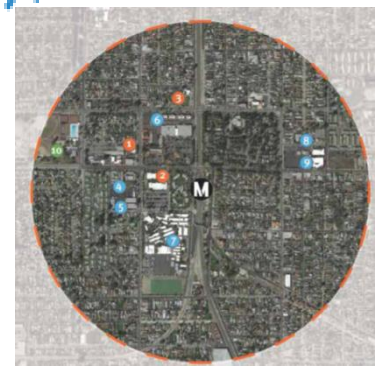
Pedestrian Shed



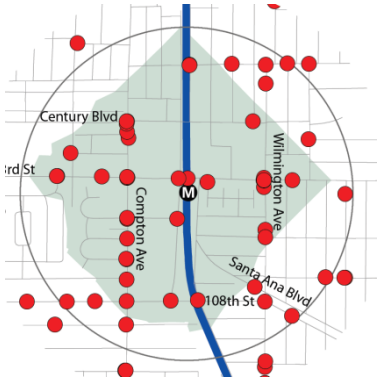
Bicycle Connections



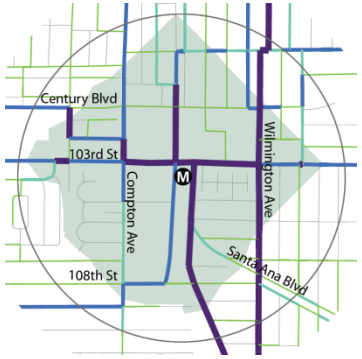
Transit Connections



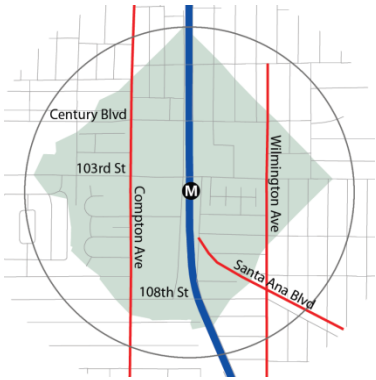
Points of Interest



Collision Data



Access Volumes



High Speed Roads

Land Use

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WALK AUDIT
DATA COLLECTION & ANALYSIS

Examples of “Barriers”

Cracked sidewalk

Restricted pedestrian movement

Missing/narrow sidewalk

No crosswalks

Uninviting/unsafe pathway

Uninviting bike lane

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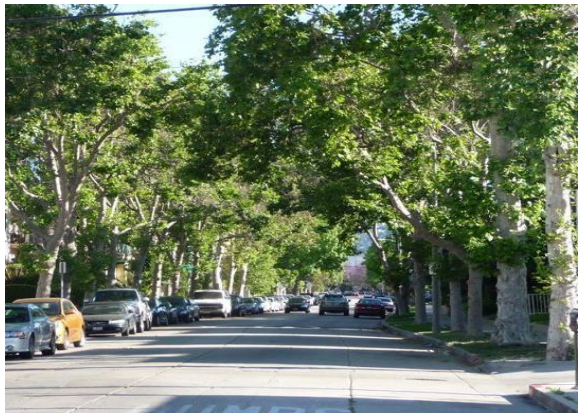
WALK AUDIT
DATA COLLECTION & ANALYSIS

Examples of “Strengths”



Mature trees/shade

Special paving, wide sidewalks, bicycle lanes

Enhanced crosswalk

Curb extension

Destination or iconic element

Directional or ID signage

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What do you notice?


ONE
WAY

PED
PED


76th
Compton Av


E Compton Blvd

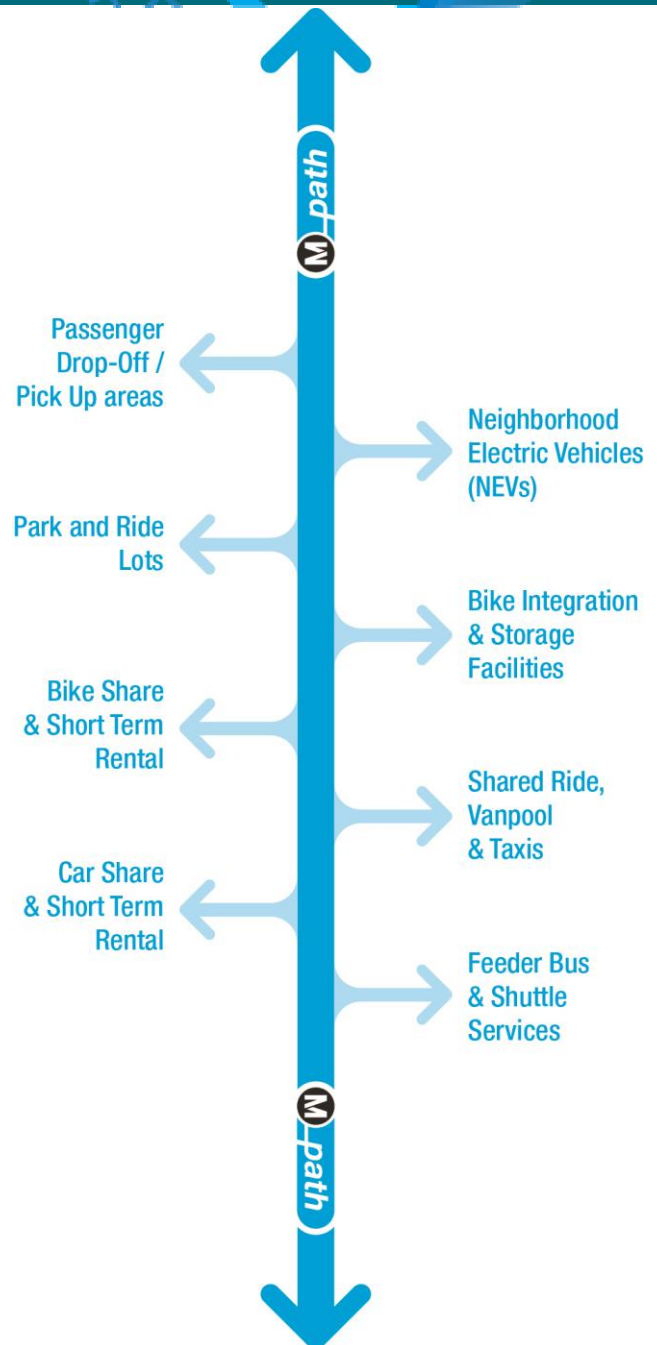

FOR SALE
RANCHO AUTO ELECTRIC
Aranbe Ave
W Rosecrans Ave


Kay St

DEFINING THE PATHWAY NETWORK

Metro Pathway

- Identify active transportation networks within station areas.
- ‘Bundle’ first-last mile strategies around active transportation networks within station areas.
- Build broad based multi-agency support, coordinate roles, and identify funding strategies.



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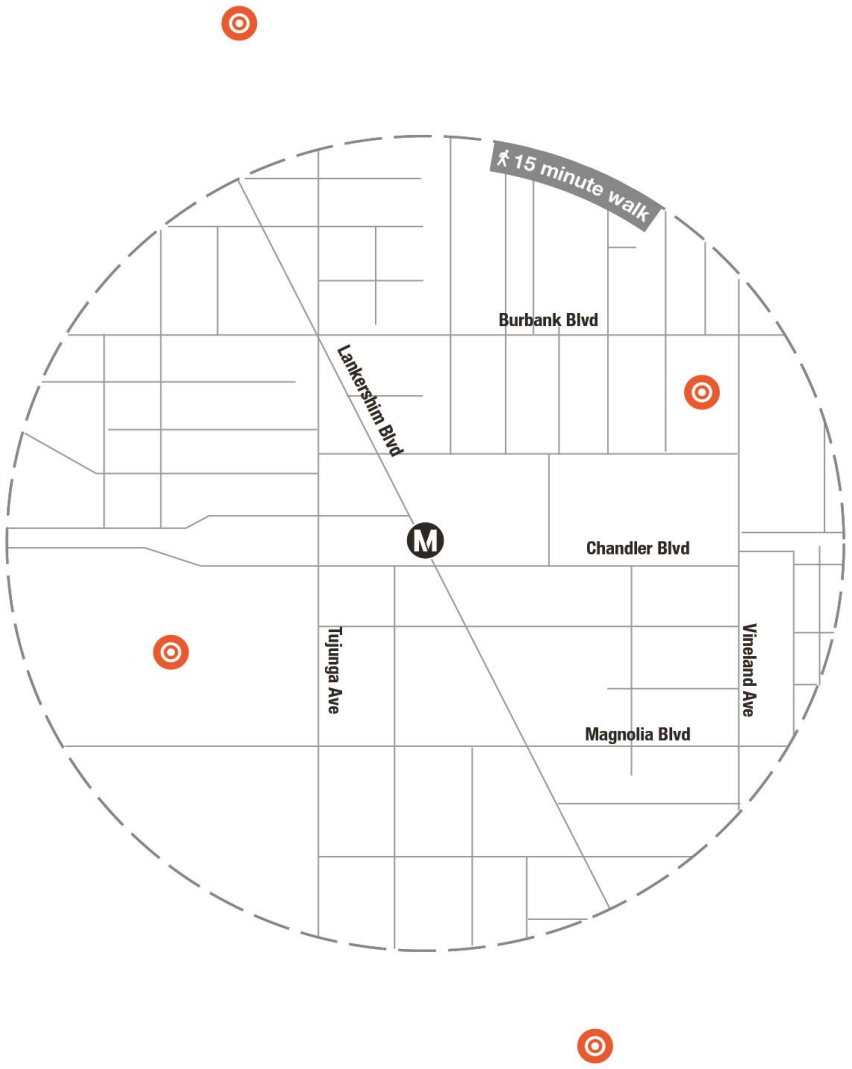
MAP STATION, DESTINATIONS & WALK-SHED
DEFINING THE PATHWAY NETWORK



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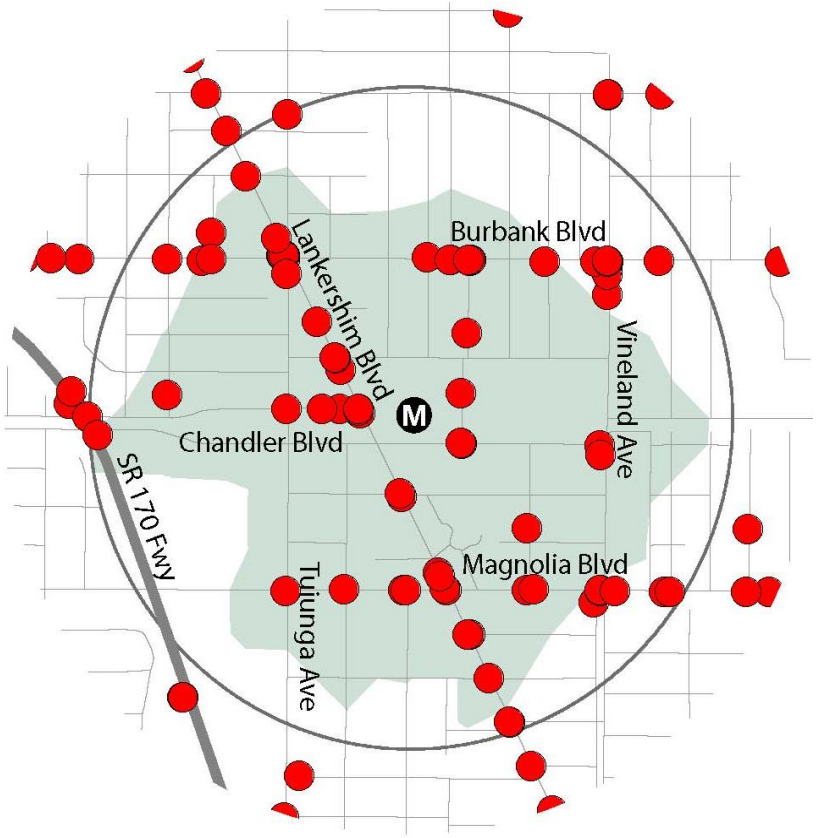
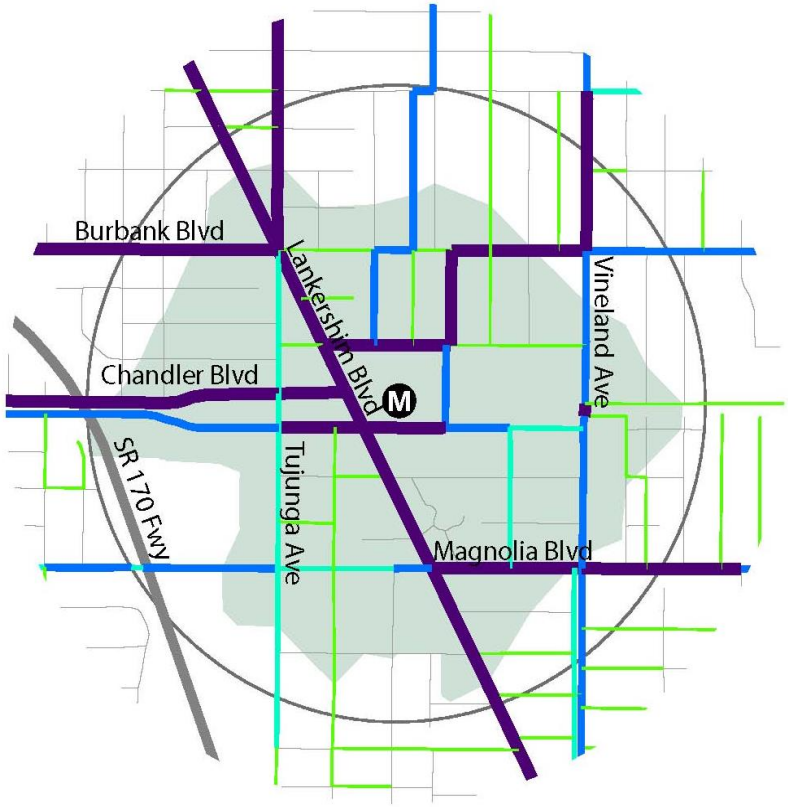
MAP ANALYSIS
DEFINING THE PATHWAY NETWORK



Collision Data



Access
Volumes

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MAP ACCESS BARRIERS & STRENGTHS

DEFINING THE PATHWAY NETWORK

LEGEND

Locations

- Metro Station
- Key Destination
- Destination Area
- Existing Bus Stop
- Existing Bikeway

Access Barriers and Strengths

- Gap in the Bicycle Network
- Street Conditions Barrier
- Specific Barrier
- Area Barrier
- Connectivity Gap
- Corridor Asset
- Specific Asset

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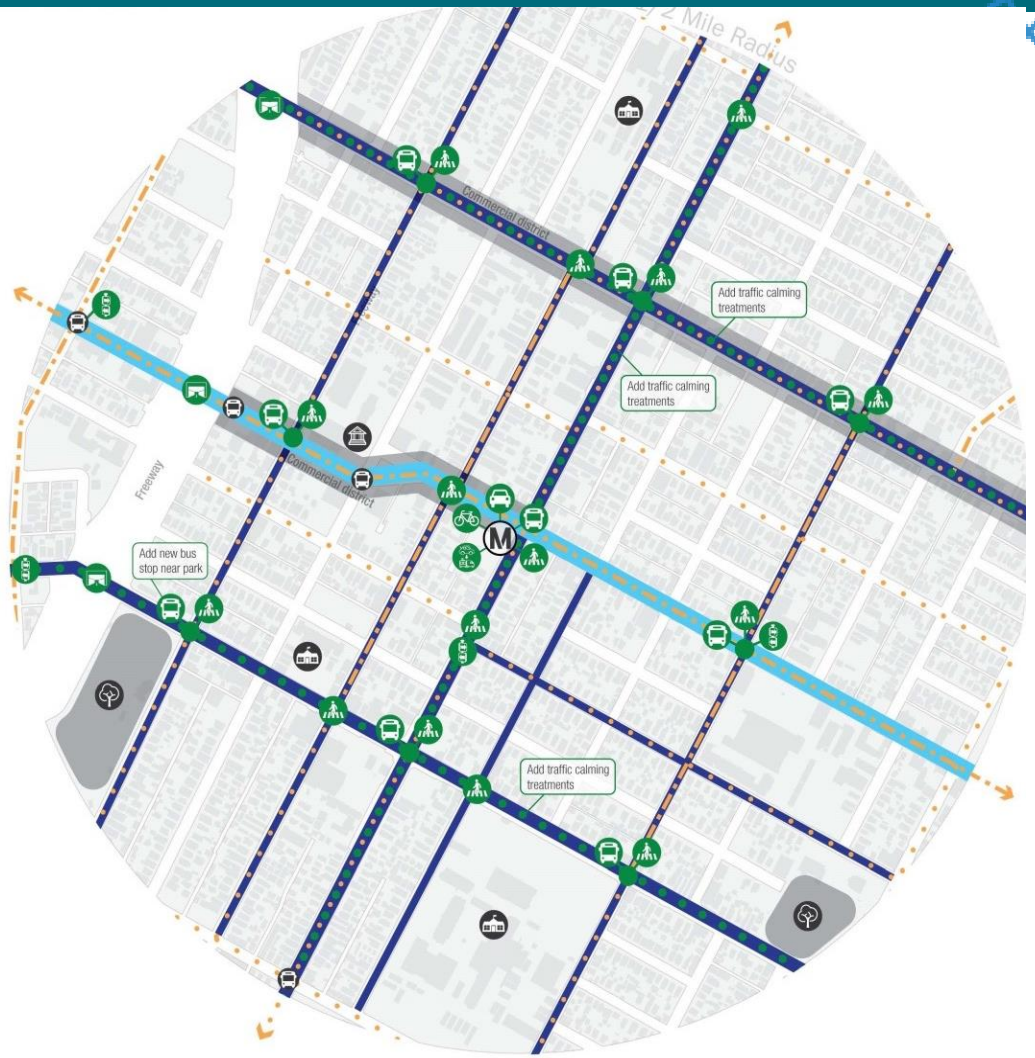
PATHWAY IMPROVEMENTS
REFINING THE PATHWAY NETWORK



LEGEND

Locations

- Metro Rail Station
- Key Destination
- Destination Area
- Bus Stop

Pathway Network

- Pathway Arterial
- Pathway Collector 1
- Pathway Collector 2
- Bikeway (existing)
- Bikeway (proposed)

- Extension to Regional Network
- Bicycle Services
- Key Recommendation (corridor)
- Key Recommendation (specific location)

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PATHWAY IMPROVEMENTS
EXAMPLES

Metro Path Components
- Crossing enhancements and connections

Signage and Wayfinding
- Pylon and medallion signage, including time-to-station notation
- Curb-edge banding
- Smart technologies, such as “next train/bus” real-time signage

Traffic Calming
- Signal modification

Dignity and Design
- Street furniture and lighting, Landscaping/shade
- Enhanced freeway underpass/overpasses and bus waiting areas

Reallocation of the Streetspace
- The “Green Zone” and the “Rolling Lane”
- Sidewalk widening

Integrated Transit Access Solutions
- Examples include Bike Share/Bike Station, Car Share, NEVs

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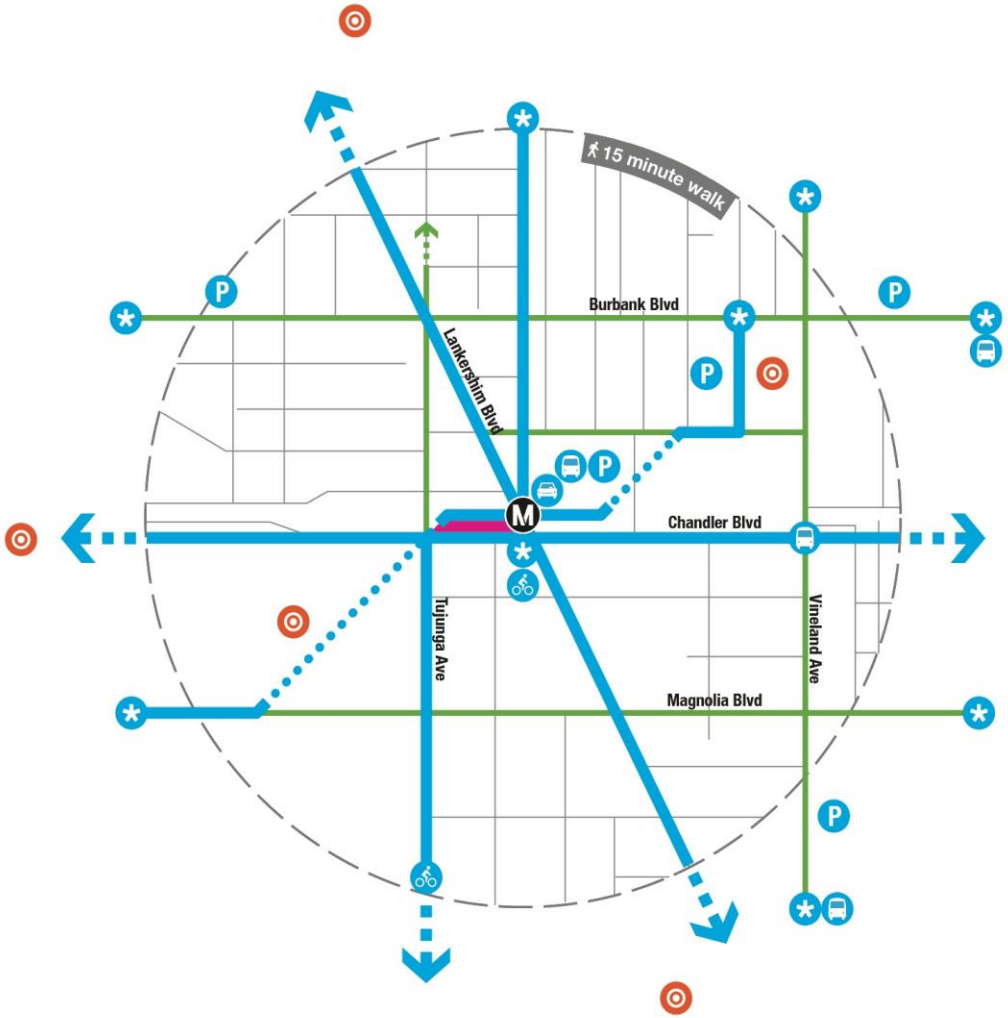
REFINING THE PATHWAY NETWORK



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Case Study: North Hollywood

EXISTING CONDITION

S Wilmington Ave. – Watts

METRO PATH - DRAFT CONCEPT ILLUSTRATION

For Illustrative Purposes Only

EXISTING CONDITION

Wilshire / Normandie

METRO PATH – DRAFT CONCEPT ILUSTRATION

QUESTIONS?

First Last Mile Strategic Plan Website:
http://media.metro.net/docs/sustainability_path_design_guidelines.pdf

Jacob Lieb:
LiebJ@metro.net

Metro

Los Angeles County
Metropolitan Transportation Authority

Thank you for listening!

Metro